

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF TEXAS
WICHITA FALLS DIVISION**

**LIGHTING BALLAST CONTROL,
LLC,**

Plaintiff,

v.

**PHILIPS ELECTRONICS NORTH
AMERICA CORP., et al.,**

Defendants.

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CIVIL ACTION NO. 7:09-CV-29-O

MEMORANDUM OPINION AND ORDER

This is a patent infringement case. The invention at issue is a lighting product, specifically an electronic ballast. A ballast is a device for starting and regulating florescent and other types of lamps. A ballast provides proper voltage to light the lamp, and regulates the electric current flowing through the lamp to control light output. The ballasts at issue in this case are designed to power florescent lamps with heatable filaments. The parties dispute various claim terms in United States Patent 5,436,529 (“529 Patent”) issued on July 25, 1995 and entitled “CONTROL AND PROTECTION CIRCUIT FOR ELECTRONIC BALLAST.” The Court has construed the disputed claim terms after reviewing the briefs and responses of the parties, the applicable law, and where appropriate, any extrinsic evidence submitted by the parties.

I. BACKGROUND

The Court sets forth only those facts necessary to provide context for the claim construction. Plaintiff Lighting Ballast Control, LLC, (“Lighting Ballast”) holds the exclusive

right to enforce the 529 Patent. The inventor is Andrzej “Andrew” Bobel. The 529 Patent covers a lighting ballast that powers florescent lamps with heatable filaments. An electronic ballast practicing the 529 Patent operates in three different stages: (1) the initial start-up of the ballast, (2) the shut-down or sleep-mode of the ballast, and (3) the re-starting of the ballast after an inoperable lamp has been replaced. Pl.’s Opening Br. Cl. Const. 4, ECF No. 84. The invention was intended to address significant technical challenges facing the ballast industry in 1993; specifically, how to preserve the integrity of the ballast by not drawing power from a power line source when a lamp is removed or defective, and by not having to turn the power OFF and ON when the lamp is replaced. *Id.* at 6. The invention covered by the 529 Patent was intended to remedy these issues in a safe, energy efficient, and affordable manner. *Id.*

Lighting Ballast sues Defendant Universal Lighting Technologies, Inc. (“Universal”) claiming infringement of the 529 Patent because Universal manufactures, uses, or sells electronic ballasts utilizing circuitry that monitors the voltage across one or more lamps and provides end-of-life protection for multiple types of failures.¹ Pl.’s Orig. Compl. 4, ECF No. 1. Lighting Ballast specifically points to the ULT B254PUNV-D ballast as infringing on one or more claims of the 529 Patent. *Id.* Universal denies any infringement and brings a counterclaim seeking a declaration that Universal has not infringed any of the claims of the 529 Patent, and that the patent is invalid. Def.’s Am. Answer 7, ECF No. 70.

II. LEGAL STANDARDS - PATENT CLAIM CONSTRUCTION

Patent infringement is the unauthorized making, using, selling, offering to sell, or

¹ Lighting Ballast originally sued several defendants, however, Universal is the only remaining defendant in the case, pending final settlement with Philips Electronics North America Corp.

importing into the United States of any patented invention during the term of the patent. 35 U.S.C. § 271(a). In a patent infringement case, a court first determines the proper construction of the patent claims by establishing, as a matter of law, the scope and boundaries of the subject-matter of the patent. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370, 384-85 (1996). Second, the trier of fact compares the properly construed claims to the allegedly infringing device(s) and determines whether there has been an infringement. *Id.* The issue before the Court is the proper construction of certain disputed claims in the 529 Patent.

A. Rules of Claim Construction

The claims of a patent are the numbered paragraphs at the end of the patent that define the scope of the invention, and thus the scope of the patentee's right to exclude others from making, using, or selling the patented invention. *See Astrazeneca AB v. Mutual Pharm. Co.*, 384 F.3d 1333, 1335-36 (Fed. Cir. 2004). Claim construction is the process of giving proper meanings to the claim language thereby defining the scope of the protection. *See Bell Commc'ns Research, Inc. v. Vitalink Commc'ns Corp.*, 55 F.3d 615, 619 (Fed. Cir. 1995) (internal citations omitted).

Claim construction starts with the language of the claim itself since a patent's claims define the invention to which the patentee is entitled the right to exclude. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc). "The claims themselves provide substantial guidance as to the meaning of particular claim terms." *Id.* at 1314. Moreover, claim terms should be given their ordinary and customary meaning as understood by a person of ordinary skill in the art as of the effective filing date of the patent application. *Id.* at 1313. This is because a patent is

addressed to, and intended to be read by, others skilled in the particular art. *Id.* However, the patentee is free to define his own terms, so long as any special definition given to a term is clearly defined in the specification. *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1388 (Fed. Cir. 1992).

When construing disputed claim terms the court should look first to the intrinsic record of the patent, including the claims and the specification, to determine the meaning of words in the claims. *Nazomi Commc'ns., Inc. v. Arm Holdings, PLC*, 403 F.3d 1346, 1368 (Fed. Cir. 2005). “The specification is always highly relevant to the claim construction analysis. Usually it is dispositive; it is the single best guide to the meaning of a disputed term.” *Phillips*, 415 F.3d at 1315. The specification acts as a dictionary when it expressly or implicitly defines terms. *Id.* at 1321. Courts should also refer to the prosecution history if it is in evidence. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). The prosecution history is part of the intrinsic record and consists of a complete record of all proceedings before the United States Patent and Trademark Office, including prior art cited during the examination of the patent, and express representations made by the applicant as to the scope of the claims. *Id.*

The Federal Circuit has also stated that district courts may “rely on extrinsic evidence, which consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.” *Id.* (internal quotations omitted). Dictionaries and treatises can be “useful in claim construction[,]” particularly technical dictionaries which may help the court “to better understand the underlying technology and the way in which one of skill in the art might use the claim terms.” *Id.* at 1318 (internal quotations omitted). As to expert testimony, the Federal Circuit has stated:

[E]xtrinsic evidence in the form of expert testimony can be useful to a court for a variety of purposes, such as to provide background on the technology at issue, to explain how an invention works, to ensure that the court's understanding of the technical aspects of the patent is consistent with that of a person of skill in the art, or to establish that a particular term in the patent or the prior art has a particular meaning in the pertinent field.

Id. However, “a court should discount any expert testimony that is clearly at odds with the claim construction mandated by the claims themselves, the written description, and the prosecution history, in other words, with the written record of the patent.” *Id.* (internal quotations omitted). Extrinsic evidence is less significant than the intrinsic record and undue reliance on it may pose a risk of changing the meaning of claims, contrary to the public record contained in the written patent. *Id.* 1317, 1319.

B. Means-Plus-Function Limitations

Pursuant to 35 U.S.C. § 112 ¶ 6 a patentee may express a claim limitation by reciting a function to be performed by a generic means, rather than reciting in the claim the actual structure for performing the particular function. Section 112, ¶ 6 provides:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

Section 112, ¶ 6 thus “operates to restrict claim limitations drafted in such functional language to those structures, materials, or acts disclosed in the specification (and their equivalents) that perform the claimed function.” *Personalized Media Comm’ns, LLC v. Int’l Trade Comm’n*, 161 F.3d 696, 703 (Fed. Cir. 1999). “The point of the requirement that the patentee disclose particular structure in the specification and that the scope of the patent claims be limited to that

structure and its equivalents is to avoid pure functional claiming.” *Aristocrat Techs. Australia Pty Ltd. v. Int’l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008).

The determination of whether a particular limitation should be regarded as a means-plus-function limitation is a question of law, even though it is a question on which evidence from experts may be relevant. *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1358 (Fed. Cir. 2004) (citations omitted). The *Lighting World* court set forth the standard to be used when determining whether to apply section 112, ¶ 6 to a claim limitation:

A claim limitation that actually uses the word “means” invokes a rebuttable presumption that § 112, ¶ 6 applies. By contrast, a claim term that does not use “means” will trigger the rebuttable presumption that § 112, ¶ 6 does not apply. The use of the term “means” is central to the analysis because the term “means,” particularly as used in the phrase “means for,” is part of the classic template for functional claim elements and has come to be closely associated with means-plus-function claiming.

Id. at 1358. However, claim language that further defines a generic term, such as nouns or adjectival qualifications that appear before or after the word “means,” can add or suggest sufficient structure to avoid section 112, ¶ 6. *Mass. Inst. of Tech. v. Abacus Software*, 462 F.3d 1344, 1354 (Fed. Cir. 2006). Moreover, section 112, ¶ 6 may be avoided where “the claim term is used in common parlance or by persons of skill in the pertinent art to designate structure, even if the term covers a broad class of structures and even if the terms identify the structures by their function.” *Id.* at 1356 (quotations and citations omitted).

Claim construction of a means-plus-function limitation has two steps: “First, the court must determine the claimed function. Second, the court must identify the corresponding structure in the written description of the patent that performs that function.” *Applied Med. Res. Corp. v. U.S. Surgical Corp.*, 448 F.3d 1324, 1332 (Fed. Cir. 2006). The claimed function is recited in the

claim itself, and the corresponding structure “must not only perform the claimed function [but] the specification must clearly associate the structure with the performance of the function.”

Cardiac Pacemakers, Inc. v. St. Jude Med., Inc., 296 F.3d 1106, 1113 (Fed. Cir. 2002). The court should first inquire as to whether “structure is described in [the] specification, and, if so, whether one skilled in the art would identify the structure from that description.” *Atmel Corp. v. Info. Storage Devices, Inc.*, 198 F.3d 1374, 1381 (Fed. Cir. 1999). “The inquiry is whether one of skill in the art would understand the specification itself to disclose a structure, not simply whether that person would be capable of implementing a structure.” *Biomedino, LLC v. Waters Techs. Corp.*, 490 F.3d 946, 953 (Fed. Cir. 2007).

III. ANALYSIS

The parties have presented two claims from the 529 Patent for construction. Claim 1 recites (with the disputed claim limitations emphasized in bold):

1. An energy conversion device employing an **oscillating resonant converter** producing oscillations, having **DC input terminals producing a control signal** and adapted to power at least one gas discharge lamp having heatable filaments, the device comprising:

voltage source means providing a constant or variable magnitude DC voltage between the DC input terminals;

output terminals connected to the filaments of the gas discharge lamp;

control means capable of receiving control signals from the DC input terminals and from the resonant converter, and operable to effectively initiate the oscillations, and to effectively stop the oscillations of the converter; and a direct current blocking means coupled to the output terminals and operable to stop flow of the control signal from the DC input terminals, whenever at least one gas discharge lamp is removed from the output terminals or is defective.

Pl.'s Opening App. 14, ECF No. 84-1.

Claim 18 recites (again with the disputed claim limitations emphasized in bold):

18. An energy conversion device employing an **oscillating resonant converter**, having **DC input terminals** and adapted for powering at least one gas discharge lamp having heatable filaments, the device comprising:

voltage source means able to provide a constant or variable magnitude DC voltage between the DC input terminals;

output terminals for connection to the filaments of the gas discharge lamp;

control means able to receive control signals from the DC input terminals and from the resonant converter, and operable to effectively initiate the oscillations, and to effectively stop the oscillations of the converter; and

direct current blocking means coupled to output terminals and operable to stop flow of the control signal from the DC input terminals, whenever at least one gas discharge lamp is removed from the output terminals or is defective wherein the direct current blocking means includes a semiconductor diode and is connected effectively across at least one heatable filament of at least one gas discharge lamp.

Pl.'s Opening App. 15, ECF No. 84-1. Independent Claims 1 and 18 are nearly identical, with Claim 18 adding one additional limitation relating to a diode. Pl.'s Opening Br. 14, ECF No. 84. The disputed issues come from Claims 1 and 18; the parties dispute the construction of three alleged means-plus-function limitations, and four other terms. *Id.* The Court will turn to the disputed limitations, the first of which appears in both Claims 1 and 18.

A. Voltage Source Means Dispute

The parties dispute whether the limitation “voltage source means providing a constant or variable magnitude DC voltage between the DC input terminals” is a function-plus-means

limitation, subject to construction as limited by section 112, ¶ 6. Lighting Ballast argues that “voltage source” connotes sufficient structure to one skilled in the art and that it should avoid treatment as a means-plus-function limitation. In the alternative, Lighting Ballast argues that if the Court determines that section 112, ¶ 6 applies, then the specification discloses the corresponding structure. Universal argues that the term should be treated as a means-plus-function limitation because it is written in means-plus-function format, and furthermore, that the specification does not disclose a corresponding structure, making both claims in which the limitation appears indefinite.

1. Plaintiff’s Proposed Construction

Lighting Ballast argues that this limitation, while using the term “means,” is not a means-plus-function limitation because the term “voltage source” has an understood meaning in the art when read in the context of the specification. *See* Pl.’s Opening Br. 14-15, ECF No. 84. Specifically, according to Lighting Ballast, “voltage source means [providing (claim 1), able to provide (claim 18)] a constant or variable magnitude DC voltage between the DC input terminals” connotes the structure of a rectifier to anyone skilled in the art. *Id.* at 15. As support for this assertion Lighting Ballast points to extrinsic evidence: expert testimony from Andrew Bobel, the inventor, who has several years of experience working on electronic ballast designs, and Dr. Victor Roberts, an expert witness. *Id.* Both Bobel and Dr. Roberts testify, that as persons skilled in the art, the “voltage source” limitation clearly connotes the structure of a rectifier. Pl.’s Opening App. Ex. 2-A at 226, ECF No. 84-3; Ex. 3 at 7-8, ECF No. 84-7. In the alternative, Lighting Ballast argues that if the Court determines that section 112, ¶ 6 applies, making the limitation a means-plus-function limitation, then the limitation clearly discloses the structure of a

rectifier. Pl.’s Opening Br. 15-16, ECF No. 84.

2. *Defendant’s Proposed Construction*

Universal argues that this limitation is governed by section 112, ¶ 6 as a means-plus-function limitation. Def.’s Opening Br. 16, ECF No. 85. First, Universal points to the use of the term “means,” which presumptively invokes section 112, ¶ 6. *Id.* Secondly, according to Universal, the limitation itself clearly recites a function only. *Id.* And third, the claim language does not point to any structure. *Id.* Thus, Universal asserts, this limitation is a classic means-plus-function limitation and must be construed according to section 112, ¶ 6. Universal then goes on to argue that the specification for the 529 Patent does not disclose any structure, a rectifier or otherwise, for performing the claimed function. *Id.* 18-20. Accordingly, Universal urges that Claims 1 and 18 should be held invalid because they are indefinite.

3. *Court’s Analysis and Construction*

The Court begins with the presumption that this is a means-plus-function limitation, subject to construction under section 112, ¶ 6 because it uses the term “means,” and is written in a classic means-plus-function format. *See Kemco Sales, Inc. v. Control Papers Co., Inc.*, 208 F.3d 1352, 1361 (Fed. Cir. 2000). Lighting Ballast asserts that the presumption should not apply because, despite use of the term “means,” the limitation recites sufficient structure to avoid section 112, ¶ 6. To determine whether the limitation “voltage source means” connotes sufficient structure, the Court must first consider all of the recited claim language, including nouns, adjectival modifiers, and function descriptions, and secondly, determine whether that claim language has an understood meaning in the electronic ballast field when read in the context of the 529 Patent specification. *See Linear Tech. Corp. v. Impala Linear Corp.*, 379 F.3d

1311, 1320 (Fed. Cir. 2004).

The words “voltage source” precede “means,” which is followed by the claimed function, “[providing/able to provide] a constant or variable magnitude DC voltage between the DC input terminals.” Lighting Ballast argues, as it must in order to avoid section 112, ¶ 6, that “voltage source” connotes sufficient structure, in this case, a rectifier. However, in order to come to this conclusion, Plaintiff uses the recited function along with inventor and expert testimony, that a rectifier would be required where the function is “providing a constant or variable magnitude DC voltage.” Lighting Ballast also points the Court to case law stating “it is sufficient to avoid [section 112, ¶ 6] treatment if the claim term is used in common parlance or by persons of skill in the pertinent art to designate structure, even if the term covers a broad class of structures and even if the terms identify the structures by their function.” *Mass. Inst. of Tech.*, 462 F.3d at 1356.

Universal argues that the term “source” and by extension, the term “voltage source,” is insufficient to connote structure and directs the Court to case law. In *Nilssen v. Motorola, Inc.*, the court held that even if the term “source” in “source means” connotes a device that provides power, this alone is not a sufficient structural recitation to remove the limitation from the ambit of section 112, ¶ 6. 80 F. Supp.2d 921, 928-29 (N.D. Ill. 2000). The difference here is that “source” is preceded by “voltage” obviously meaning that it is a source of voltage. However, the Court is inclined to agree with the *Nilssen* court, that even assuming “voltage source” connotes a structure, it is not a sufficient structural recitation to overcome the presumption in favor of section 112, ¶ 6.

Lighting Ballast’s argument that “voltage source” connotes sufficient structure to avoid means-plus-function construction is problematic for other reasons as well. First, Lighting Ballast

does not point the Court to any evidence, intrinsic or extrinsic, that the term “voltage source” is commonly used in the electronic ballast industry to mean a rectifier. Rather, Plaintiff relies on the description of the function, stating that persons of skill in the electronic ballast industry, including Bobel and Dr. Roberts, understand that this function, insofar as it includes supplying a DC voltage, can be and often is performed by a rectifier. Secondly, Lighting Ballast admits that a rectifier is not the only structure capable of providing a DC voltage, pointing out that a battery would also suffice. There is no indication that “voltage source” is often used synonymously with the term “rectifier” by those of ordinary skill in the electronic ballast industry, and Lighting Ballast does not appear to argue as much. In fact, the opposite would seem to be the case, since a rectifier is merely one voltage source. Lastly, neither the language of claim 1 or claim 18 describes the function of a rectifier. Rather, the recited function, “providing a constant or variable magnitude DC voltage between the DC input terminals,” refers only inferentially to the function of a rectifier.² For these reasons, the quotation from *Massachusetts Institute of Technology, supra*, does not assist Plaintiff in avoiding section 112, ¶ 6. Therefore, the Court finds that this limitation, even when read in the context of claims 1 and 18, of which it is a part, does not suggest sufficient structure on its face to overcome the means-plus-function presumption, and it must be construed in accordance with section 112, ¶ 6.

In order to construe the “voltage source means” limitation in accordance with section 112, ¶ 6, the Court must determine the claimed function, and then identify the corresponding structure in the written specification of the 529 Patent that performs that function. *See Applied*

² Dr. Roberts appears to acknowledge this fact when he states in his declaration that “one skilled in the art would immediately ascertain and implement the structure necessary to supply the DC supply voltage[.]” Pl.’s Opening App. Ex. 3 at 7-8, ECF No. 84-7.

Med. Res. Corp., 448 F.3d at 1332. The Federal Circuit has stated that section 112, ¶ 6 represents a *quid pro quo* by allowing inventors to use a generic means expression for a claim as long as the specification indicates the structure that constitutes the means. *See Atmel*, 198 F.3d at 1381. The section 112, ¶ 6 “tradeoff cannot be satisfied when there is a total omission of structure. There must be structure in the specification.” *Id.* at 1382. Once it is established that there is a disclosure of structure in the specification, the analysis proceeds to the sufficiency of the disclosure—whether one skilled in the art will know and understand what structure corresponds to the means limitation. *Id.* Therefore, as long as there is disclosure of structure, the written description in the 529 Patent need not explicitly describe the structure; rather, disclosure of the structure may be implicit so long as it meets the above test. *See id.* at 1380. However, the Court must bear in mind that the proper “inquiry is whether one of skill in the art would understand the specification itself to disclose a structure, not simply whether that person would be capable of implementing a structure.” *Biomedino*, 490 F.3d at 953. In other words, if no structure is disclosed, it is not sufficient that a person of skill in the art could implement a structure. *See id.*

As established *supra*, the claimed function is “providing [or (able to provide)] a constant or variable magnitude DC voltage between the DC input terminals.” Thus, the description in the 529 Patent must disclose a structure, either explicitly or implicitly, such that one with skill in the art would understand the disclosure to connote a structure, that performs this function. *See Atmel*, 198 F.3d at 1382. The parties do not dispute that the 529 Patent does not explicitly disclose the structure of a rectifier. Therefore, the issue turns on whether the specification in the 529 Patent implicitly discloses a rectifier as the structure to perform the above specified function.

The parties dispute this point. Lighting Ballast directs the Court to several references in the 529 Patent to drawing power from a power line source and to DC supply voltages. Pl.’s Opening Br. 16, ECF No. 84. Lighting Ballast, relying on testimony from Bobel and Dr. Roberts, argues that “the only structure that can perform such a function in a lighting ballast is a rectifier, which is implicit, but clear, from the specification’s multiple references to ‘a power line source’ and ‘a DC supply voltage.’” *Id.* Otherwise, Lighting Ballast does not point the Court to any language in the 529 Patent that discloses a structure. *See id.* Defendant, Universal, argues that the description in the 529 Patent does not disclose a corresponding structure, and that Lighting Ballast may not use expert testimony to suggest a structure that was not disclosed in the patent. Def.’s Resp. Br. 4-6, ECF No. 89.

Lighting Ballast relies on language from *Atmel*, where the court states that “disclosure of structure corresponding to a means-plus-function limitation may be implicit in the written description if it would have been clear to those skilled in the art what structure must perform the function recited in the means-plus-function limitation.” 198 F.3d at 1380. However, this statement must be understood in its proper context. As noted *supra*, the central issue in the *Atmel* opinion was not whether there was a disclosure of a structure, the first step in the analysis, but whether the alleged disclosure would connote a structure to one skilled in the art. *See id.* at 1380-82. The appellant in *Atmel* argued that a citation to a particular article in the patent’s specification, which included the article’s title, was a sufficient disclosure of the structure at issue such that a person of skill in the art would understand the nature of the corresponding structure. *Id.* at 1380-81 (“Atmel specifically directs us to the testimony of its expert . . . that the mere mention of the *title* of the . . . article in the specification is sufficient for one skilled in the

art to envision the structures disclosed in that article”) (emphasis in original). The Federal Circuit agreed, holding that “interpretation of what is disclosed must be made in light of the knowledge of one skilled in the art.” *Id.* at 1380. Therefore, when the *Atmel* court made the statement above, relied on by Lighting Ballast, the court was specifically discussing the second step of the implied-disclosure analysis, the sufficiency of the alleged disclosure.

It is also worth noting that this language was itself used in a quotation in the *Atmel* opinion. *See id.* at 1380. The *Atmel* court was quoting from what were proposed supplemental guidelines from the PTO which were themselves adopted from the Federal Circuit’s *In re Dossel* opinion. *Id.*; *see In re Dossel*, 115 F.3d 942 (Fed. Cir. 1997). In *Dossel*, the court, like the *Atmel* court, was discussing the sufficiency of the the alleged disclosure of the structure corresponding to a means-plus-function limitation in a claim. *Id.* at 946. The specific structure at issue was a computer, however, neither the written specification nor the claims ever used the word computer. *Id.* Rather the description described the structure of a computer, by its functions—“clearly, a unit which receives digital data, performs complex mathematical computations and outputs the results to a display must be implemented by or on a general or special purpose computer.” *Id.* at 946-47. The *Dossel* court then stated that this conclusion was bolstered by the fact that “in the medical imaging field, it is well within the realm of common experience that computers are used to generate images for display by mathematically processing digital input.” *Id.* at 947. Thus, it is clear that the appellant in *Dossel* had overcome the initial hurdle of pointing to a disclosure of the structure in the patent’s specification, and the court’s focus was considering whether the disclosure was adequate.³

³ Plaintiff does not point the Court to any language in the specification of the 529 Patent describing the function of a rectifier.

Finally, in *Biomedino*, the Federal Circuit addressed the substance of Lightning Ballast’s argument. 490 F.3d at 952-53. In *Biomedino*, the court considered the claim limitation “control means” and whether the patent’s specification disclosed a corresponding structure. *Id.* at 948-49. The only references in the specification to the “control means” were a box labeled “Control” in a diagram of the invention and a statement that the regeneration process ““may be controlled automatically by known differential pressure, valving and control equipment.”” *Id.* at 949. The appellant relied on expert testimony to show that from the above statement, one skilled in the art would be able to identify a structure.⁴ *Id.* at 951. The court rejected this argument, stating that the proper inquiry was not whether a person skilled in the art could implement a structure but whether that person would *understand the specification to disclose a structure*. *Id.* at 953 (emphasis added). Thus, the *Biomedino* court held that the “bare statement that known techniques or methods can be used does not disclose structure.” *Id.*

Here, Lighting Ballast fails to point the Court to any language in the 529 Patent that discloses either implicitly or explicitly the structure of a rectifier. Rather, Lighting Ballast attempts to use testimony from the inventor, Bobel, and an expert, Dr. Roberts, that they understand that the invention covered by the 529 Patent would require a rectifier. In so doing, Lighting Ballast finds itself in same position as the appellant in *Biomedino*, arguing that one skilled in the art could implement a structure. Lighting Ballast relies on the testimony of Bobel and Dr. Roberts, that they, as persons skilled in the art of lighting ballasts, understand that when the specification speaks of using a DC supply voltage, where power is supplied from a power line source, which they know to supply AC voltage, that a structure to convert AC power to DC

⁴ Similar to Dr. Roberts’s argument in this case, *see supra* n2 and *infra* n6.

power would be required. Furthermore, since the invention is a lighting ballast, Dr. Roberts testifies, a rectifier would be the structure used in the vast majority of applications. While all of this may be true, it ignores the proper inquiry laid out by the Federal Circuit in *Atmel* and further explained in *Biomedino*. First, Lighting Ballast must point the Court to the disclosure of a corresponding structure in the specification, and only then, may the Court evaluate the sufficiency of the disclosure and determine whether one skilled in the art would understand the disclosure to suggest the corresponding structure. *See Atmel*, 198 F.3d at 1381.

Since Lighting Ballast is unable to point the Court to language in the specification disclosing a structure, it seeks to rely on expert testimony that one skilled in the art is capable of implementing a structure after reading the specification.⁵ However, the Federal Circuit, in *Biomedino*, expressly forbids such use of expert testimony. *Biomedino*, 490 F.3d at 953. At most, the language in the specification to which Lighting Ballast directs the Court requires an inference on the part of one skilled the art who has read the 529 Patent. The references to a power line source and a DC supply voltage do not connote structure; rather they require the person skilled in the art to implement one.⁶ Therefore, the Court finds that Plaintiff, Lighting Ballast, has failed to identify a structure in the 529 Patent's specification that corresponds to the "voltage source means" limitation, contrary the requirements of 35 U.S.C. § 112, ¶ 6.

IV. CONCLUSION

⁵ The Court notes that in its briefing, Plaintiff admits that the 529 Patent focuses on the energy output rather than the energy input side of the ballast. Pl.'s Opening Br. Cl. Const. 4, n.4, ECF No. 84. This may explain the absence of any disclosure of a structure to match the "voltage source means" limitation in Claims 1 and 18.

⁶ Dr. Roberts only bolsters this conclusion in his declaration when he states: "one skilled in the art would immediately *ascertain and implement* the structure necessary to supply the DC supply voltage, based on the particular application of the ballast in question." Pl.'s Opening App. Ex. 3 at 8, ECF No. 84-7 (emphasis added); see also n2 *supra*.

A determination that a claim is indefinite is a question of law and is part of the court's duty as the construer of patent claims. *Personalized Media Commc'ns*, 161 F.3d at 705. It is well-established that the determination of whether a claim is invalid as indefinite depends on whether one skilled in the art would understand the scope of the claim at issue when it is read in light of the specification. *North Am. Vaccine, Inc. v. American Cyanamid Co.*, 7 F.3d 1571, 1579 (Fed. Cir. 1993). Where one employs means-plus-function language in a claim, one must set forth, in the specification, an adequate disclosure showing what is meant by the claim language. *Atmel*, 198 F.3d at 1378-79 (*quoting In re Donaldson Co., Inc.*, 16 F.3d 1189, 1195 (Fed. Cir. 1994)). If an applicant fails to set forth an adequate disclosure of the structure intended by the claim language, the applicant fails to "particularly point out and distinctly claim the invention," as required by section 112, ¶ 2. *Id.* at 1379. In order for a claim to meet the particularity requirements of section 112, ¶ 2, the corresponding structure of a means-plus-function limitation must be disclosed in the written specification. *Id.* at 1382. Where a patent specification fails to disclose a corresponding structure for a means-plus-function limitation in a claim, that claim is invalid for indefiniteness under section 112, ¶ 2. *See id*; *see also Default Proof Credit Card Sys., Inc. v. Home Depot U.S.A., Inc.*, 412 F.3d 1291, 1302-03 (Fed Cir. 2005)..

The Court has held that the "voltage source means" limitation, present in both Claims 1 and 18, is a means-plus-function limitation, subject to construction under section 112, ¶ 6. Applying section 112, ¶ 6 the Court found that the specification of the 529 Patent fails to disclose a corresponding structure for the "voltage source means." Therefore, since the 529 Patent fails to disclose a structure for a means-plus-function limitation in a claim, those claims, Claims 1 and 18, are indefinite under section 112, ¶ 2 because they fail to particularly point out

and distinctly claim the subject matter which the applicant regards as his invention. *See Atmel*, 198 F.3d at 1379; *Default Proof Credit Sys.*, 412 F.3d at 1302-03. Accordingly, the Court finds that Claims 1 and 18 are invalid for indefiniteness and may not be enforced by Lighting Ballast against Universal.

While the parties present other claim terms and limitations from Claims 1 and 18 for construction the Court need not reach them due to the invalidity of both claims.

Signed this **19th** day of **August, 2010**.


Reed O'Connor
UNITED STATES DISTRICT JUDGE